

BASIN PLAN AMENDMENT TO INCORPORATE WATER EFFECT RATIOS (WERS) FOR COPPER  
IN LOWER CALLEGUAS CREEK AND MUGU LAGOON  
(CALLEGUAS CREEK WATERSHED, VENTURA COUNTY)

**Table 1. List of commenters submitting written comments before the close of the public comment period.**

Comment #	Commenter	Date Received
1	Heal the Bay	10/13/06
2	Camrosa Water District (on behalf of Camarillo Sanitation District, City of Camarillo, City of Thousand Oaks, City of Simi Valley, Camrosa Sanitary District, and Ventura County Water Works District #1)	10/12/06

Note: The comment # above corresponds to the first number in the Comment Number field in Table 2.

**Table 2. Responsiveness summary for written comments submitted before the close of the public comment period.**

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION	LOCATION IN DOCUMENTS
1.1	<p><u>Developing a site-specific objective (SSO) for Calleguas Creek and Mugu Lagoon is premature.</u></p> <p>The Regional Water Quality Control Board (“Regional Board”) should not consider a SSO until the Calleguas Creek Watershed Metals and Selenium TMDL is in effect and implementation efforts are well underway. The State Water Resource Control Board’s <i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> (“SIP”) outlines conditions under which the Regional Board should consider a SSO. For instance, there must be “a demonstration that the discharger cannot be assured of achieving the criterion or objective and/or effluent limitation through reasonable treatment, source control, and</p>	<p>Regional Board staff has concluded that, in its professional judgment, it is appropriate to adopt water effect ratios (WERS) for copper in lower Calleguas Creek and Mugu Lagoon for the following reasons:</p> <p>1) The recently adopted Calleguas Creek Watershed Metals and Selenium TMDL and this study to determine WERS for copper are part of a comprehensive watershed management strategy developed by the Calleguas Creek stakeholders with input from Regional Board management and a Technical Working Group (TWG) made up of The City of</p>	<p>The WER study, conducted in accordance with U.S. EPA guidance document entitled “Interim Guidance on Determination and Use of Water-Effect Ratios for Metals,” February 1994, EPA-823-B-94-001, demonstrated that site specific conditions in lower Calleguas Creek and Mugu Lagoon have been shown to reduce the toxicity of</p>	<p>Resolution – added Finding 9</p>

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	<p>pollution prevention measures.” (SIP at 32). Section 5.2 of the SIP also notes that “it may be more appropriate to pursue other approaches to achieve the applicable criterion or objective rather than develop a site specific objective.” Specifically, the SIP gives the example of a “TMDL” as an alternate to a SSO (SIP at 31).</p>	<p>Thousand Oaks, Ventura Coastkeeper, City of Simi Valley, Department of Fish and Game, U.S. Fish and Wildlife Service, Ventura County Watershed Protection Division, Los Angeles Regional Water Quality Control Board and the U.S. Navy. The Calleguas Creek Watershed Copper WER Work Plan was reviewed by this TWG as well as Regional Board management.</p> <p>2) The Calleguas Creek Metals and Selenium TMDL, adopted by the Regional Board on June 8, 2006 and considered by the State Board on October 25, 2006, expresses the water quality targets for copper as the copper water quality criteria from the federal California Toxics Rule (CTR). Those criteria include a numerical threshold multiplied by a water-effect ratio (WER). The WER has a default value of 1.0 unless a site-specific WER is approved. To use a WER other than the default of 1.0, a study must be conducted consistent with US EPA’s WER guidance and adopted by the Regional Board</p>	<p><u>copper to aquatic life. Based on the above, the Regional Board staff finds it appropriate to adopt a copper WER for the lower Calleguas Creek and Mugu Lagoon at this time. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (known as the State Implementation Plan or SIP) sets forth: “A [Regional Board] may develop site-specific objectives whenever it determines, in the exercise of its professional judgement, that it is appropriate to do so.” Though not a precondition to the Regional Board’s exercise of its</u></p>	

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		<p>through the state’s Basin Plan amendment process. Item 22 of Table 7-19.2, Calleguas Creek Watershed Metals and Selenium TMDL: Implementation Schedule, Basin Plan amendment language directs Regional Board staff to prepare within four months of TMDL adoption a Basin Plan amendment to incorporate copper WERs based on a study performed by stakeholders. If the Regional Board approves site-specific WERs for copper, the TMDL targets for the affected waterbodies will be modified in accordance with all legal and regulatory requirements and implemented in accordance with the approved WERs using the equations set forth in Table 7-19.1, Calleguas Creek Watershed Metals and Selenium TMDL: Elements, Basin Plan Amendment language.</p> <p>3) WERs are a widely accepted means of modifying water quality objectives to take into consideration site-specific characteristics. The California Toxics Rule, promulgated by the</p>	<p><u>professional judgment, the Regional Board notes that the WER study demonstrates that the dischargers cannot be assured of achieving the criterion or objective and/or effluent limitation through reasonable treatment, source control, and pollution prevention measures. The proposed WERs recommended in “Proposed Amendments to the Water Quality Control Plan to Incorporate Water Effect Ratios (WERs) for Copper in Lower Calleguas Creek and Mugu Lagoon” (Staff Report) modify the water quality objectives for copper applicable to these waters such that the</u></p>	

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		<p>US EPA, provides States with the authority to develop and use WERs to modify criteria if the WER development follows US EPA guidance. The development and adoption of the WERs for lower Calleguas Creek and Mugu Lagoon followed the standard guidelines for metal WERs developed by US EPA.</p> <p>4) The technical report entitled "Calleguas Creek Watershed Copper Water-Effects Ratio (WER) Study" demonstrates that the site specific water chemistry in lower Calleguas Creek and Mugu Lagoon reduces the toxicity of copper to aquatic life and, therefore, that a WER of greater than 1.0 is justified and will be as protective of aquatic life as the CTR criteria are intended to be.</p> <p>Additionally, though the WERs are not being incorporated into the Basin Plan as SSOs, but rather as implementation provisions for the copper criteria contained in the CTR, Regional Board staff contends that the conditions for developing an SSO as outlined in the SIP have been met. First, section 5.2 of the</p>	<p><u>objectives are designed to be as protective of the aquatic life in these waterbodies as the criteria set forth in the CTR.</u></p>	

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		<p>SIP, first paragraph, states that:</p> <p style="text-align: center;"><i>A RWQCB may develop site-specific objectives whenever it determines, in the exercise of its professional judgment, that it is appropriate to do so.</i></p> <p>That provision is not superseded by subsequent provisions that dictate other circumstances under which Board staff must also consider adopting an SSO. Board staff's technical and policy justification for proposing the WERs is discussed above.</p> <p>However, the TMDL technical report prepared by Larry Walker Associates also makes the demonstration, specified in section 5.2 of the SIP, second paragraph, specifically (3) a-d on page 32 of the SIP, that the discharger cannot be assured of achieving the criterion or objective and/or effluent limitation through reasonable treatment, source control, and pollution prevention measures.</p> <p>Finally, the proposed Basin Plan amendment language includes a monitoring component to ensure that the WERs are fully protective of the beneficial</p>		

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		uses in lower Calleguas Creek and Mugu Lagoon. If monitoring shows that these WERs are not fully protective the Board resolution directs staff to bring the WERs back to the Board for reconsideration. These provisions are included in the tentative resolution and proposed Basin Plan amendment language.		
1.2	<p><u>There is not enough data to develop an appropriate WER for Calleguas Creek watershed.</u></p> <p>Data collected in the WER Study are insufficient to develop an appropriate WER for Calleguas Creek and Mugu Lagoon. The study design included three sampling events in the Lagoon under varied seasonal conditions (two dry weather and one wet weather), and four sampling events in the Creek under varied seasonal conditions (two dry weather and two wet weather). (Of note, the Calleguas Creek Watershed Copper WER Work Plan calls for a minimum of four sampling events. It is unclear why only three sampling events were conducted in the Lagoon).</p>	<p>More significantly, the US EPA's 1994 Guidance requires consideration of a minimum of three WER measurements to develop the final WER. This requirement was met for both the lagoon and creek. A total of 12 and 8 individual WERs were developed for the lagoon and creek, respectively. A total of 6 and 4 individual WERs were used to derive the final WERs for the lagoon and creek, respectively. Board staff used the more critical (lower) individual WERs for the calculation of the final WERs.</p> <p>The "Calleguas Creek Watershed Copper WER Work Plan" states that:</p> <p style="padding-left: 40px;"><i>The goal of the sampling and toxicity testing will be to produce 4 successful WER events.</i></p> <p>In addition to meeting the requirements of EPA guidance, from a practical standpoint</p>		

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1.3	<p><u>There is not enough data to develop an appropriate WER for Calleguas Creek watershed.</u> The WER needs to represent situations where copper is most bioavailable... Many factors can greatly influence the copper toxicity. As outlined in the Regional Board Staff Report, “[b]ioavailability and toxicity of copper are dependent on site-specific factors such as pH, hardness, suspended solids, dissolved oxygen, dissolved carbon compounds, salinity, and other constituents.” (Staff Report at 4). Thus, a better characterization of the Creek and Lagoon is necessary.</p>	<p>three samples for the lagoon was adequate because the “critical condition” (the condition producing the lowest fWER) for the lagoon is dry weather. Therefore, it is important to have two dry weather events; this study included two dry weather events for the lagoon. Conversely, it is less important to have two non-critical conditions (wet weather), since they were not included in the calculation of the final WER for the lagoon.</p>		
		<p>A comparative analysis of TSS and hardness of each sample event with the average, median and range (2 standard deviations) was provided on page 23-24 of the Larry Walker Associates’ Technical Report, entitled “Calleguas Creek Watershed Copper Water-Effects Ratio (WER) Study” (June 8, 2006). The comparison shows that TSS and hardness were within the range of 2 standard deviations of the historic data used.</p> <p>Representative conditions were meant to ensure there were no extreme variations from conditions that would be expected in the Creek and Lagoon. The 1994 Guidance states on page 61 that WERs (within the same waterbody) are similar if</p>		

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		they are within a factor of 3 of each other. The WERs that were generated during the study were all within a factor of 3 of each other.		
1.4	<p><u>There is not enough data to develop an appropriate WER for Calleguas Creek watershed.</u> Ideally, four sampling events (2 wet and 2 dry) per year over five years are needed to develop a WER that accurately reflects site specific conditions. Alternately, one could analyze the 18 years of data referenced, but not provided, in the WER Study and target the worst case conditions for sampling in the field. This could be accomplished by determining the parameters that may affect copper bioavailability and then analyzing the distributions of these parameters. Then an explicit decision should be made as to the appropriate sampling conditions based upon the parameter distributions. Finally, a sampling plan should be tailored to capture these conditions.</p>	<p>See response to comments 1.2 and 1.3.</p> <p>Additional receiving water monitoring shall be required of dischargers subject to site-specific WER(s) to evaluate whether objectives, as modified by the WER(s), are as protective of beneficial uses as the CTR objectives are intended to be. This additional monitoring shall be required through the discharger's NPDES permit monitoring and reporting program. If additional monitoring indicates a change in the chemical characteristics of the water body or toxicity, the Regional Board may reconsider the site-specific WER(s).</p>		
1.5	<p><u>The "critical condition" of the Creek and Lagoon should be further explored.</u> The Regional Board Staff Report concludes that the critical condition for the Creek is wet weather and the critical condition for the Lagoon is during dry weather. However as</p>	<p>As shown in Appendix C, Table 12, of the Staff Report, dated August 29, 2006, analysis of dry versus wet weather WERs in the lagoon and creek illustrates that dry weather produces the lowest site EC50s for the lagoon and therefore the lowest</p>		

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	mentioned above, this analysis relies on very few data points. Therefore, it is uncertain if the critical condition has truly been identified. Also, how does the Regional Board define the critical condition? The Regional Board should also consider the time when the most sensitive species is present or reproducing as a critical condition.	WER, while wet weather produces the lowest site EC50s and therefore the lowest WER for the creek. Therefore, to be protective under all weather conditions, the individual WERs calculated for the critical conditions must be used to calculate the fWER for the lagoon and the fWER for the creek. Additionally, EPA's 1994 "Interim Guidance on Determination and Use of Water-Effect Ratios for Metals" is designed to ensure that any site specific WER will produce a modified objective that is as protective of aquatic species as the CTR criterion. See also response to comment 1.2.		
1.6	<p><u>The WER for the Creek should not be greater than the WER for the Lagoon.</u></p> <p>The Basin Plan Amendment proposes a final copper WER of 1.51 for Mugu Lagoon and 3.69 for the Lower Calleguas Creek. The flows from Calleguas Creek enter Mugu Lagoon. As noted by peer reviewer Dr. James Moffett, "...a higher criteria in the creek may result in more Cu entering the lagoon." This is unacceptable. The upstream discharge should not cause or contribute to the exceedance of a water quality standard downstream. Thus, the more protective WER should be applied to both waterbodies.</p>	<p>Waterbodies frequently have different upstream and downstream objectives, which reflect differences in waterbody characteristics such as salinity as well as designated beneficial uses. The Regional Board is required to protect downstream beneficial uses and regularly considers downstream objectives when setting permit limits.</p> <p>Page 19 of the Staff Report includes the following section clarifying that downstream objectives must be met. It states:</p>	<p>Yes. The following language has been added to the Resolution:</p> <p style="padding-left: 40px;"><u>The Regional Board directs staff when proposing permit requirements to consider downstream objectives and ensure that any requirements to achieve applicable</u></p>	<p>Resolution, Resolved 5.</p> <p>Basin Plan Amendment Language, added after first paragraph under the Implementation Provision section.</p>

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		<p><u>Downstream Protection</u> Implementation actions to achieve applicable copper objectives in Calleguas Creek must also result in compliance with downstream objectives in Mugu Lagoon. Regional Board regulations prohibit the violation of water quality objectives assigned to any water body segment. Therefore, if copper levels in downstream reaches (Mugu Lagoon) violate water quality objectives, the party responsible for the exceedance will be held accountable.</p>	<p><u>objectives, as modified by site-specific WERs, also ensure that downstream standards will be achieved.</u></p> <p>The following text has been added to the Basin Plan Amendment language: <u>Notwithstanding the provisions below, regulatory actions to achieve applicable objectives, as modified by site-specific WERs, must ensure that downstream standards will also be achieved.</u></p>	
1.7	<p><u>An alternate test species should be selected for Calleguas Creek.</u> The WER Study uses <i>Mytilus edulis</i>, a marine organism, as one of two test species in the Creek. The Study justifies this action by noting that the downstream Creek water is brackish.</p>	<p>The CTR states that for brackish waterbodies (those with salinities between 1 and 10 ppt more than 5% of the time) the more stringent of the freshwater and saltwater criteria apply. In the case of copper, the saltwater criteria</p>		

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	<p>However, in several cases ambient Creek samples had low salinities, so the laboratory added significant amounts of GP-2 salts. Adding salts to the ambient water may change the water chemistry and lower the bioavailability of copper. Thus, the use of <i>Mytilus</i> in the Creek is extremely questionable as is the data generated from altered ambient water. Instead, an alternate species should be selected for Calleguas Creek. The Staff Report mentions that several experts discussed this situation and concluded that the salts would not be an issue. (Staff Report at 15). What studies were evaluated in forming this conclusion?</p>	<p>are the more stringent. Therefore, the saltwater criteria apply to both lower Calleguas Creek and Mugu Lagoon. Therefore, the saltwater species, <i>Mytilus edulis</i> is an appropriate test species to use in site water tests to set the WER.</p> <p>Additionally, <i>Mytilus edulis</i> is recognized as a sensitive test species. It was the most acutely sensitive test species used in the development of the draft national copper criteria for acute conditions. In November 2003, US EPA published the 2003 Draft Update of Ambient Water Quality Criteria for Copper. Embryo-larval life-stages of bivalve mollusc genera represent the first two of the four most sensitive genera, including the genera <i>Mytilus</i>.</p> <p>Regional Board staff consulted with the Technical Advisor for the study, Dave Hansen, as well as Jeff Cotsifas of Pacific EcoRisk laboratory and Steve Bay, the Head Toxicologist for the Southern California Water Research Project via a conference call on May 3, 2006. Dave Hansen reviewed the report cited below and concluded that the addition of GP-2 salts was not a concern.</p>		

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		<p>The following are the reports that the experts above relied upon to make their conclusions:</p> <p><u>Validation and Update of a Model Used to Predict Copper Toxicity to the Marine Bivalve Mytilus sp.</u>            Received 10 March 2005; revised 28 July 2005; accepted 24 August 2005            W. R. Arnold,<sup>1</sup> J. S. Cotsifas,<sup>2</sup> K. M. Corneillie<sup>3</sup>            1 Copper Development Association, Inc., 260 Madison Avenue, New York, New York 10016            2 Pacific EcoRisk Inc., 835 Arnold Drive, Suite 104, Martinez, California 94553            3 Larry Walker Associates, Inc., 250 Lafayette Circle, Suite 200, Lafayette, California 94549</p> <p><u>Predicting copper toxicity in estuarine and marine waters using the Biotic Ligand Model</u>            Marine Pollution Bulletin 50 (2005) 1634–1640            W.R. Arnold a,* , R.C. Santore b, J.S. Cotsifas c            a Copper Development Association Inc., 260 Madison Avenue, New York, NY 10016, USA            b HydroQual Inc., 4914 West Genesee</p>		

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		St., Camillus, NY 13031, USA c Pacific EcoRisk Inc., 835 Arnold Dr., Suite 104, Martinez, CA 94553, USA		
1.8	<p><u>The <i>Ceriodaphnia dubia</i> toxicity results should be explored.</u> The WERs calculated for the <i>Ceriodaphnia dubia</i> in the Creek are relatively high. Does this high WER value indicate that <i>Ceriodaphnia</i> is not as sensitive a species as was thought? Also, a peer reviewer noted that it is unusual that the WERs calculated from <i>Ceriodaphnia dubia</i> results would be higher than the WERs from <i>Mytilus edulis</i> results. (Staff Report at 14). We urge the Regional Board to require more information and analysis of this outcome.</p>	<p>The California Toxics Rule states that for brackish waterbodies (those with salinities between 1 and 10 ppt more than 5% of the time) the more stringent of the freshwater and saltwater criteria apply. According to the CTR definition, the waterbodies in this study are classified as brackish. In the case of copper, the saltwater criteria are the more stringent. Therefore, the saltwater criteria apply to both lower Calleguas Creek and Mugu Lagoon. Therefore, the saltwater species, <i>Mytilus edulis</i> is the most appropriate of the two test species to use in site water tests to set the WER.</p>		
1.9	<p><u>Two test species should be used in both Calleguas Creek and Mugu Lagoon.</u> The test species <i>Ceriodaphnia dubia</i> was only used for the first two sampling events, and <i>Mytilus edulis</i> was used for all events. (Staff Report at 8). To more adequately characterize conditions, two test species should be used in the Creek and the Lagoon. As discussed in the Interim Procedure, a secondary test should be conducted with a species that is taxonomically</p>	<p>See response to comments 1.7 and 1.8 above.</p>		

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	different than the first test species. (Interim Procedure at 21). Conducting tests on multiple species will account for species variation and sensitivity. Moreover, the discussion in the preceding paragraphs offers compelling reasons for using multiple test species in the Lagoon and Creek.			
1.10	<u>Two test species should be used in both Calleguas Creek and Mugu Lagoon.</u> Many NPDES permits issued by the Regional Board include a requirement to initially screen three test species to determine the most sensitive species. Often a re-screening is required every few years, to account for changing conditions. The Regional Board should consider requiring a similar screening procedure for the Calleguas WER.	The three species screening is a procedure for whole effluent toxicity testing in NPDES permits. In the development of a WER, Regional Board staff depended on the national criteria documents to determine the most sensitive species and, therefore, three species screening is not required.		
1.11	Table 24 of the WER Study provides a calculated WER for Revolon Slough. We support the Regional Board staff's decision to not apply a WER to Revolon Slough, as no monitoring was done in the Slough itself.	Comment noted. Staff did not propose a WER for Revolon Slough.		
1.12	Did the Study deviate from the 1994 Interim Guidance in any way? If so, what was different?	<ul style="list-style-type: none"> <li>• As stated in response to comments 1.7 and 1.8, two test species for the lagoon were not used; <i>Mytilus edulis</i> was the only test species used for the lagoon.</li> <li>• In the calculation of the final WER, an hWER was not calculated as described on pages 31 and 32 of the 1994 Interim Guidance. An hWER</li> </ul>		

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		<p>eliminates the need to assume that WERs determined at design flow will provide adequate protection at higher flows. In calculating the final WER the lower of the hWER or the lowest WER apply. The hWER was not used in this study. It was more environmentally conservative to use the lowest individual WER than the hWER.</p> <ul style="list-style-type: none"> <li>• They did not mix upstream and downstream water instead they used downstream water. The reason for not mixing the upstream and downstream waters is that there are no POTW discharges to the reach for which the WERs were being developed. Method 2 of the 1994 Guidance provides information regarding collecting samples in an area where there are a number of dischargers and where the site is not in the vicinity of a plume. Creating a simulated downstream water would have failed to sample the influence of non-point discharges to Lower Calleguas Creek and Mugu Lagoon.</li> </ul> <p>While upstream water will usually be mixed with effluent to prepare simulated downstream water (page</p>		

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		30, 1994 Interim Guidance), the Interim Guidance states that: <i>The samples of upstream water must be representative. Simulated site water if near plumes, upstream or downstream site water can be used with considerations.</i>		
1.13	Do flow and/or temperature conditions impact the copper bioavailability?	Page xii of the 1994 Interim Guidance states that, <i>“it is best if the sampling events occur during both low and higher-flow periods.”</i> By sampling in wet and dry weather, this was satisfied. Flow does matter because when there is an increased or decreased flow it can change the chemistry of the water. This change in chemistry can make the copper more or less bioavailable.  The 1994 Interim Guidance does not make mention of temperature as affecting copper toxicity; the only mention is that temperature is recorded during toxicity testing in the lab.		
2.1	The copper WER was developed, following EPA guidance, as part of the watershed’s overall implementation strategy to address copper in the Calleguas Creek Watershed.	Staff agrees that to be consistent, urban and agricultural runoff in addition to POTWs should be included as sources of copper in the Resolution. The TMDL	Yes	Resolution, Resolved 3

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	<p>Although we fully support the Copper WER, we view that publicly owned treatment works (POTWs) should not be the only source of copper highlighted in the Tentative Resolution. The Calleguas Creek Watershed Metals and Selenium TMDL (Metals TMDL) identified multiple sources of copper, including urban runoff, agriculture, and open space. The Metals TMDL implementation plan described plans for copper to implement and evaluate effectiveness of agricultural and urban best management practices (BMPs) and source control and/or effluent discharge removal for POTWs.</p>	<p>states in Table 7-9.1, under Source Analysis, "Significant sources of metals ... include urban runoff, agricultural runoff, groundwater seepage, and POTW effluent."</p>		
	<p>To address this concern, we request the following clarification to be added to Finding 12 on page 3 of the Tentative Resolution:</p>	<p>Staff agrees with the language suggested by the commenter with the addition of, "as Board staff deems appropriate" to the first sentence of Resolved #3. This revision allows Board staff to consider available monitoring data and use professional judgment to make appropriate proposals to the Board in support of any revisions to dischargers' monitoring plans.</p>		
	<p>The POTWs, <u>agriculture and urban areas</u> discharging to these waterbodies are expected to be the primary parties involved in compliance with the revised objectives. If approved, the copper WERs would be reflected in revised effluent and receiving water limitations for the affected POTWs <u>and urban dischargers</u> and waterbody reaches, subject to antidegradation and antibacksliding requirements. It is not foreseeable that the amendment would</p>	<p>Regional Board staff will revise the appropriate monitoring and reporting programs to ensure the achievement of the WERs. These monitoring programs will include the monitoring programs required by the Calleguas Creek Metals and Selenium TMDL and the Agricultural Waiver for Irrigated Lands.</p>		

BASIN PLAN AMENDMENT TO INCORPORATE WATER EFFECT RATIOS (WERs) FOR COPPER  
 IN LOWER CALLEGUAS CREEK AND MUGU LAGOON  
 (CALLEGUAS CREEK WATERSHED, VENTURA COUNTY)

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION	LOCATION IN DOCUMENTS
	<p>instigate new or different compliance measures other than those required to comply with the current objectives. Therefore, the additional economic cost of this amendment should be negligible <u>to all involved parties.</u></p>	<p>In addition, monitoring requirements for the copper WER should include both NPDES dischargers and agriculture to be consistent with the Metals and Selenium TMDL and the Calleguas Creek Watershed TMDL Monitoring Program. To address this concern, we suggest the following clarifications be added to Resolution 3 on page 4.</p>		
	<p>The Regional Board directs staff to propose additional monitoring and reporting requirements in subsequent <u>Conditional Waiver and</u> NPDES permitting actions for dischargers to lower Calleguas Creek and Mugu Lagoon, to evaluate whether the objectives as modified by the site-specific WERs are as protective of beneficial uses as the CTR objectives are intended to be and to support the Board's reconsideration of the modified objectives and the WERs upon which they are based, during the triennial review process. To the extent possible, proposed monitoring and reporting requirements should be coordinated with any Executive Officer approved Calleguas Creek</p>			

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	Watershed TMDL Monitoring Plan (CCWTMP).			
2.2	<p>As discussed in the comment above, monitoring requirements for the copper WER should include both NPDES dischargers and agriculture to be consistent with the Metals and Selenium TMDL and the Calleguas Creek Watershed TMDL Monitoring Program. The Tentative Basin Plan Amendment should also be revised. Suggested language is presented below.</p> <p>Additional receiving water monitoring shall be required of dischargers subject to site-specific WER(s) to evaluate whether objectives, as modified by the WER(s), are as protective of beneficial uses as the CTR objectives are intended to be. This additional monitoring shall be required through the discharger's NPDES permit monitoring and reporting program <u>and the Conditional Waiver monitoring and reporting program</u>. If additional monitoring indicates a change in the chemical characteristics of the water body or toxicity, the Regional Board may reconsider the site-specific WER(s).</p>	<p>According to page 87, Table 49 of the Final Draft Metals and Selenium Technical Report by Larry Walker Associates (March 29, 2006), the estimated dissolved copper loading in the Calleguas Creek Watershed by land use breaks down in the following way:</p> <ul style="list-style-type: none"> <li>▪ 516 lbs/yr (63% of total loading) from POTWs</li> <li>▪ 23 lbs/yr (3% of total loading) from agricultural sources</li> <li>▪ 32 lbs/yr (4% of total loading) from urban sources.</li> </ul> <p>Thus, POTWs contribute 16-22 times more pounds/year of copper than urban or agricultural sources, respectively; indicating that urban and agriculture are a small part of the total problem.</p> <p>Board staff finds that it is not necessary to add the suggested words "and the Conditional Waiver monitoring and reporting program", since on an annual basis, Board staff provides a report to the Board on the Conditional Waiver Program. At that time, or at the Board's discretion, the Board may reconsider the provisions, including monitoring, of the</p>	<p>Yes. The Regional Board staff has stricken the following language from the Basin Plan Amendment: <u>This additional monitoring shall be required through the discharger's NPDES permit monitoring and reporting program.</u></p>	<p>Basin Plan Amendment Language, 3<sup>rd</sup> paragraph under Implementation Provisions header.</p>

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		Conditional Waiver. Additionally, Board staff will review data from the Calleguas Creek Watershed Monitoring Program to evaluate whether to propose additional monitoring for metals and, specifically copper, in the monitoring program under the Conditional Waiver.		
2.3	<p>As discussed above in the recommended changes to the Tentative Resolution and Basin Plan Amendment, the staff report should also be revised to recognize the multiple sources of copper to the Calleguas Creek watershed. Control of urban runoff and agricultural contributions should be discussed in the Staff Report on page 18, as in the suggested edits to the following paragraphs:</p> <p><b>Potential Means of Compliance</b> The California Water Code (Section 13360) prohibits Regional Boards from specifying the means of compliance with their orders. However, the California Environmental Quality Act (Sections 21159 and 21159.4) requires Regional Boards, when adopting requirements for the installation of new pollution control equipment or new performance standards for pollution control, to analyze reasonable means of compliance with the new regulations,</p>	Regional Board staff agrees with this comment and will incorporate the suggested changes.	Yes. Per commenter's suggestion (see summary of comment for exact changes)	Staff Report, Pages 18 & 20

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	<p>including general consideration of environmental impacts, alternatives, and mitigation measures. The following is a summary of potential means of compliance with the performance standards that would be established by the proposed Basin Plan amendments. Environmental impacts, alternatives, and mitigation measures are addressed in a separate draft environmental document (CEQA Checklist) for the proposed amendments.</p>	<p>The POTWs, <u>agriculture and urban areas</u> discharging to these waterbodies are expected to be the primary parties involved in compliance with the revised objectives. If approved, the copper WERs would be reflected in revised effluent and receiving water limitations for the affected POTWs <u>and urban dischargers</u> and waterbody reaches, subject to antidegradation and antibacksliding requirements. It is not foreseeable that the amendment would instigate new or different compliance measures other than those required to comply with the current objectives. Therefore, the additional economic cost of this amendment should be negligible to all involved parties.</p>		

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	<p>Similar to the Potential Means for Compliance section, POTWs are the only source identified in the Economic Considerations discussion on page 20 of the Staff Report. Agriculture and urban runoff should also be noted as primary parties involved in compliance with the revised objectives.</p>	<p><b><i>Economic considerations.</i></b> The POTWs, <u>agriculture, and urban areas</u> discharging to these waterbodies are expected to be the primary parties involved in compliance with the revised objectives. Because the WERs would modify objectives to values that are higher than the current objectives applicable to the waterbodies, this amendment should not necessitate any facility upgrades or modifications to treatment processes, <u>or additional control measures other than those required to comply with the current objectives.</u> Therefore, the economic cost of this amendment should be negligible in terms of the cost to the regulated community.</p>		

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